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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/788,564	02/27/2004	Kenneth Barr	39750-0008C1	8219

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EXAMINER	
STEADMAN, DAVID J	
ART UNIT	**PAPER NUMBER**
1656	

DATE MAILED: 04/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/788,564	BARR ET AL.	
	Examiner	Art Unit	
	David J. Steadman	1656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *47-64* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *47-64* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status of the Application

[1] The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 1656.

[2] Claims 47-64 are pending in the application.

[3] Applicant's amendment to the claims, filed on 12/8/2005, is acknowledged. This listing of the claims replaces all prior versions and listings of the claims.

[4] Receipt of a terminal disclaimer, filed on 12/8/2005, is acknowledged.

[5] Applicant's arguments filed on 12/8/2005 have been fully considered and are deemed to be persuasive to overcome some of the rejections previously applied. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn.

[6] The text of those sections of Title 35, U.S. Code not included in the instant action can be found in a prior Office action.

Claim to Domestic Priority

[7] Applicant's claim for domestic priority under 35 USC § 120 to US non-provisional application 10/374,539, filed on 2/25/2003, now US Patent 6,784,205, is acknowledged. Applicants' claim for domestic priority under 35 USC § 119(e) to US provisional application 60/361,475, filed on 3/1/2002, is acknowledged. In response to this Office

action, applicant should update the status of application 10/374,539, which is now US Patent 6,784,205, in the priority claim at the first paragraph of the specification.

Specification/Informalities

[8] This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 CFR 1.821(a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 CFR 1.821 through 1.825; applicants' attention is directed to the final rulemaking notice published at 55 FR 18230 (May 1, 1990), and 1114 OG 29 (May 15, 1990). To be in compliance, applicants should identify nucleotide sequences of at least 10 nucleotides and amino acid sequences of at least 4 amino acids in the specification by a proper sequence identifier, i.e., "SEQ ID NO:" (see MPEP 2422.01). If these sequences have not been listed in the computer readable form and paper copy of the sequence listing, applicant must provide an initial computer readable form (CRF) copy of the "Sequence Listing", an initial paper copy of the "Sequence Listing", as well as an amendment directing its entry into the specification, and a statement that the content of the paper and CRF copies are the same and, where applicable, include no new matter as required by 37 C.F.R. 1.821(e) or 1.821(f) or 1.821(g) or 1.821(b) or 1.825(d). See particularly the signature motif at p. 4, line 1 of ¶ [0021].

Claim Objections

[9] Claims 47-50 and 56-59 are objected to in the recitation of "PTP-1B" and "TC-PTP." Abbreviations, unless otherwise obvious and/or commonly used in the art, *e.g.*, DNA, should not be recited in the claims without at least once reciting the entire phrase, for which the abbreviation is used. Appropriate correction is required.

Claim Rejections - 35 USC § 112, Second Paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

[10] Claims 47-64 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

[a] Claims 47-48, 49 (claims 52-55 dependent therefrom), 50 (claim 51 dependent therefrom), 56-57, 58 (claims 62-64 dependent therefrom), and 59 (claims 60-61 dependent therefrom) are indefinite in the recitation of "PTP-1B" and "TC-PTP" as it is unclear from the claims and the specification as to the scope of polypeptides that are encompassed by the terms. The specification discloses a relationship between a "PTP-1B" polypeptide and metabolism and insulin sensitivity (p. 6, ¶ [0026]) and describes some features of a *human* PTP-1B or TC-PTP polypeptide (pp. 6-7, ¶¶ [0027] and [0028]), however the specification fails to define which of those features are necessary to be included within the scope of "PTP-1B" or "TC-PTP" polypeptides as encompassed

by the claims. It is suggested that applicant clarify the meanings of the terms "PTP-1B" and "TC-PTP."

[b] Claims 47 (claim 48 dependent therefrom), 50 (claim 51 dependent therefrom), 56 (claim 57 dependent therefrom), 59 (claim 60 dependent therefrom) are indefinite in the recitation of "the exosite of PTP-1B," "the exosite mutant," or the "the exosite of TC-PTP." The specification defines the "exosite" as a novel binding site that is distal to the active site of PTP-1B or TC-PTP (pp. 3-4, ¶¶ [0018] and [0019]). However, it is unclear from this "definition" as to the alternate binding site of PTP-1B or TC-PTP that is referred to by the terms "the exosite of PTP-1B" and "the exosite of TC-PTP" and mutants thereof as encompassed by the term "the exosite mutant." Also, it is noted that there is insufficient antecedent basis for the limitations "the exosite of PTP-1B," "the exosite mutant," and the "the exosite of TC-PTP" in the claims. It is suggested that applicant clarify the meanings of the terms "the exosite of PTP-1B," "the exosite mutant," and the "the exosite of TC-PTP."

[c] Claims 47, 49 (claims 50-55 dependent therefrom), 56 58 (claims 59-64 dependent therefrom) are indefinite in the recitation of "activity of PTP-1B" or "activity of TC-PTP" as it is unclear as to the "activity" that is intended as being determined in the claimed methods. It is well-known in the art that polypeptides can have numerous activities, including, *e.g.*, the ability to elicit antibodies. It is suggested that applicant clarify the claims by identifying the intended "activity" that is being determined.

[d] Claims 47 (claim 48 dependent therefrom), 49 (claims 52-55 dependent therefrom), 50 (claim 51 dependent therefrom), 56 (claim 57 dependent therefrom), 58

(claims 62-64 dependent therefrom), and 59 (claims 60-61 dependent therefrom) are drawn to methods of identifying an exosite inhibitor of PTP-1B or TC-PTP comprising steps of contacting a PTP-1B or TC-PTP with a test compound and measuring the activity of PTP-1B or TC-PTP. As noted above, the specification defines the "exosite" as a novel binding site that is distal to the active site of PTP-1B or TC-PTP (pp. 3-4, ¶¶ [0018] and [0019]). The claims are incomplete as the active method steps fail to achieve the desired result of identifying exosite inhibitors, particularly as it is unclear as to how a skilled artisan, by practicing the claimed methods, distinguishes an active site inhibitor of PTP-1B or TC-PTP from an "exosite" inhibitor of PTP-1B or TC-PTP. While it is acknowledged that claims 50 and 59 further comprise a step for comparing the activity of PTP-1B or TC-PTP in the presence of test compound with activity of the exosite mutant in the presence of the test compound, even this is no indication that the test compound is an exosite inhibitor because there is no indication in the claims or the specification that the activity of PTP-1B or TC-PTP in the presence of the test compound is identical to the activity of the exosite mutant such that a comparison of the two activities is indicative of an exosite inhibitor. It is suggested that applicant clarify the meaning of the claims by, for example, incorporating an active method step whereby an active site inhibitor of PTP-1B or TC-PTP can be distinguished from an "exosite" inhibitor of PTP-1B or TC-PTP.

[e] Claims 49, 53-55, 58, and 62-64 are indefinite in the recitation of specific amino acid positions without reciting a reference sequence. Without inclusion of a reference sequence in the claims, one of skill in the art would not be able to determine the

intended sequence(s) whose residues are referred to in the claims. It is suggested that applicant identify a reference sequence in the claims by recitation of a sequence identifier.

[f] Claim 59 (claims 60-61 dependent therefrom) is confusing in that the claim recites "identifying the exosite inhibitor of PTP-1B," however, the claim is dependent upon claim 58, which is drawn to a method of identifying an exosite inhibitor of TC-PTP. It is suggested that applicant clarify the meaning of the claim.

Claim Rejections - 35 USC § 112, First Paragraph

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

[11] Claims 47-64 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a written description rejection.

The claims are drawn to methods using a genus of "PTP-1B" or "TC-PTP" polypeptides and exosite mutants thereof. The Court of Appeals for the Federal Circuit has held that a "written description of an invention involving a chemical genus, like a description of a chemical species, 'requires a precise definition, such as by structure,

formula [or] chemical name,' of the claimed subject matter sufficient to distinguish it from other materials." UC California v. Eli Lilly, (43 USPQ2d 1398). For claims drawn to a genus, MPEP § 2163 states the written description requirement for a claimed genus may be satisfied through sufficient description of a representative number of species by actual reduction to practice, reduction to drawings, or by disclosure of relevant, identifying characteristics, *i.e.,* structure or other physical and/or chemical properties, by functional characteristics coupled with a known or disclosed correlation between function and structure, or by a combination of such identifying characteristics, sufficient to show the applicant was in possession of the claimed genus. MPEP § 2163 states that a representative number of species means that the species which are adequately described are representative of the entire genus. Thus, when there is substantial variation within the genus, one must describe a sufficient variety of species to reflect the variation within the genus.

The specification discloses only a single representative species of the genus of PTP-1B polypeptides, *i.e.,* SEQ ID NO:1, only a single representative species of the genus of TC-PTP polypeptides, *i.e.,* SEQ ID NO:2, and only 17 residues of an "exosite" wherein mutations may be made to either of SEQ ID NO:1 or 2 (see residues recited in claims 49 and 58). Other than these representative species, the specification fails to describe any additional species by any relevant, identifying characteristics or properties other than being "PTP-1B" or "TC-PTP" polypeptides or exosite mutants thereof.

Further, the recitation of "PTP-1B" and "TC-PTP" fails to provide a sufficient description of the recited genus of proteins as it merely describes the "functional"

features of the genus without providing any definition of the structural features of the species within the genus. The CAFC in *UC California v. Eli Lilly*, (43 USPQ2d 1398) stated that: "In claims to genetic material, however a generic statement such as 'vertebrate insulin cDNA' or 'mammalian insulin cDNA,' without more, is not an adequate written description of the genus because it does not distinguish the claimed genus from others, except by function. It does not specifically define any of the genes that fall within its definition. It does not define any structural features commonly possessed by members of the genus that distinguish them from others. One skilled in the art therefore cannot, as one can do with a fully described genus, visualize or recognize the identity of the members of the genus." Similarly with the recited genus of "PTP-1B" and "TC-PTP" proteins, the functional definition of the genus does not provide any structural information commonly possessed by members of the genus which distinguish the protein species within the genus from other proteins such that one can visualize or recognize the identity of the members of the genus.

Given the lack of description of a representative number of polypeptides, the specification fails to sufficiently describe the claimed invention in such full, clear, concise, and exact terms that a skilled artisan would recognize that applicant was in possession of the claimed invention.

[12] Claims 47-64 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a method for identifying an exosite inhibitor of PTP-1B of SEQ ID NO:1 or TC-PTP of SEQ ID NO:2 comprising the steps of: 1)

contacting SEQ ID NO:1 or 2 with a test compound and a substrate, 2) contacting an exosite mutant as disclosed at pp. 28-29, ¶¶ [0108] to [0111] of the specification with said test compound and said substrate, wherein said exosite mutant has PTP activity, and 3) comparing the phosphatase activity of SEQ ID NO:1 or 2 in the presence and absence of said test compound with the phosphatase activity of said exosite mutant in the presence and absence of said test compound, wherein a test compound that results in a decrease in phosphatase activity of SEQ ID NO:1 or 2 and does not decrease phosphatase activity of said exosite mutant indicates the test compound as an exosite inhibitor, does not reasonably provide enablement for all methods for identifying an exosite inhibitor as encompassed by the claims. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

It is the examiner's position that undue experimentation would be required for a skilled artisan to make and/or use the entire scope of the claimed invention. Factors to be considered in determining whether undue experimentation is required are summarized in *In re Wands* (858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988)) as follows: (A) The breadth of the claims; (B) The nature of the invention; (C) The state of the prior art; (D) The level of one of ordinary skill; (E) The level of predictability in the art; (F) The amount of direction provided by the inventor; (G) The existence of working examples; and (H) The quantity of experimentation needed to make or use the invention based on the content of the disclosure. See MPEP §

2164.01(a). The Factors most relevant to the instant rejection are addressed in detail below.

The breadth of the claims: The claims are so broad as to encompass the use of any PTP-1B or TC-PTP polypeptide and "exosite mutant" thereof. The specification defines an "exosite mutant" of PTP-1B or TC-PTP as having "at least one of the...exosite-forming residues...modified to a different amino acid such that the resulting [polypeptide] is no longer capable of being inhibited through the exosite or displays a diminished capacity...of being inhibited through the exosite" (p. 12, ¶ [0044] and p. 13, ¶ [0049]). There is no indication in the specification that the "exosite mutant" necessarily maintains phosphatase activity. Thus, the "exosite mutant" can be catalytically inactive.

The state of the prior art; The level of one of ordinary skill; and The level of predictability in the art: At the time of the invention, recombinant wild-type human PTP-1B and recombinant human TC-PTP polypeptide and methods for identifying active-site inhibitors thereof were known in the art as evidenced by Wrobel et al. (*J. Med. Chem.* 42:3199-3202) and Asante-Appiah et al. (*J. Biol. Chem.* 276:26036-26043). However, the effects of altering the sequences of these polypeptides was highly unpredictable. The amino acid sequence of a polypeptide determines the protein's structural and functional properties. Predictability of which changes can be tolerated in an encoded protein's amino acid sequence and obtain the desired activity/utility requires a knowledge of and guidance with regard to which amino acids in the protein's sequence, if any, are tolerant of modification and which are conserved (*i.e.*, expectedly intolerant to modification), and detailed knowledge of the ways in which the proteins' structure

relates to its function. The positions within a protein's sequence where modifications can be made with a reasonable expectation of success in obtaining a polypeptide having the desired activity/utility are limited in any protein and the result of such modifications is highly unpredictable. In addition, one skilled in the art would expect any tolerance to modification for a given protein to diminish with each further and additional modification, *e.g.,* multiple substitutions. Such is evidenced by the reference of Branden et al. ("Introduction to Protein Structure", Garland Publishing Inc., New York), which teaches "[p]rotein engineers frequently have been surprised by the range of effects caused by single mutations that they hoped would change only one specific and simple property in enzymes" and "[t]he often surprising results of such experiments reveal how little we know about the rules of protein stability... ...they also serve to emphasize how difficult it is to design *de novo* stable proteins with specific functions" (page 247). The teachings of Branden et al. are exemplified by the reference of Witkowski et al. (*Biochemistry* 38:11643-11650), which teaches that only a single amino acid substitution results in conversion of the parent polypeptide's activity from a beta-ketoacyl synthase to a malonyl decarboxylase (see *e.g.*, Table 1, page 11647).

The amount of direction provided by the inventor and The existence of working examples: The specification discloses the utility of the claimed methods is for identifying therapeutic compounds with improved selectivity and *in vivo* efficacy (pp. 5-6 ¶ [0025]). While the specification discloses SEQ ID NO:1 and 2 as working examples of PTP-1B and TC-PTP polypeptides, respectively, and discloses specific working examples of "exosite mutants" thereof (pp. 28-29, ¶¶ [0108] to [0111]) that have the desired

activity/utility, the specification fails to disclose any specific guidance for using *any* PTP-1B or TC-PTP polypeptide to practice the claimed invention in accordance with the asserted utility. Furthermore, it is noted that the active method steps fail to achieve the desired result of identifying exosite inhibitors as the method steps fail to sufficiently distinguish between an active site inhibitor and an "exosite" inhibitor.

The quantity of experimentation needed to make or use the invention based on the content of the disclosure: While methods of isolating or generating variants of a polypeptide were known in the art at the time of the invention, it was not routine in the art to screen – by a trial and error process – for all polypeptides having a substantial number of substitutions or modifications as encompassed by the claims.

In view of the overly broad scope of the claims, the lack of guidance and working examples provided in the specification, the high level of unpredictability as evidenced by the prior art, and the amount of required experimentation, undue experimentation would be necessary for a skilled artisan to make and use the entire scope of the claimed invention. Applicants have not provided sufficient guidance to enable one of ordinary skill in the art to make and use the claimed invention in a manner reasonably correlated with the scope of the claims. The scope of the claims must bear a reasonable correlation with the scope of enablement (*In re Fisher*, 166 USPQ 19 24 (CCPA 1970)). Without sufficient guidance, determination of having the desired biological characteristics is unpredictable and the experimentation left to those skilled in the art is unnecessarily, and improperly, extensive and undue. See *In re Wands* 858 F.2d 731, 8 USPQ2nd 1400 (Fed. Cir, 1988).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

[13] Claims 49 and 53-55 are rejected under 35 U.S.C. 102(b) as being anticipated by Wrobel et al. (*J. Med. Chem.* 42:3199-3202). The claims are drawn to a method for identifying an exosite inhibitor of PTP-1B by contacting a test compound with PTP-1B having at least one amino acid as recited in claim 49, 53, 54, or 55. It should be noted that the recitation "an exosite inhibitor of PTP-1B" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

The reference of Wrobel et al. teaches a method for assaying the inhibitory activity of compounds against recombinant human PTP-1B by contacting the compounds with recombinant human PTP-1B in the presence of a phosphotyrosyl

dodecapeptide substrate (p. 3199, right column, bottom and Tables 1 and 2). This anticipates claims 49 and 53-55 as written.

While it is acknowledged that Wrobel et al. is silent as to the amino acid sequence of the recombinant human PTP-1B used in the inhibitory assays, the polypeptide used in the reference of Wrobel et al. appears to be identical to the recombinant human PTP-1B disclosed in the specification. Thus, absent evidence to the contrary, the polypeptide of used in the reference of Wrobel et al. comprises at least one amino acid as recited in claim 49, 53, 54, or 55. Since the Office does not have the facilities for examining and comparing applicant's PTP-1B protein with the PTP-1B protein of the prior art, the burden is on the applicant to show a novel or unobvious difference between the claimed product and the product of the prior art (i.e., that the PTP-1B protein of the prior art does not possess the same material structural and functional characteristics of the PTP-1B protein as recited in the claims). See *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977) and *In re Fitzgerald* et al., 205 USPQ 594.

[14] Claims 58 and 62-64 are rejected under 35 U.S.C. 102(a) as being anticipated by Asante-Appiah et al. (*J. Biol. Chem.* 276:26036-26043). The claims are drawn to a method for identifying an exosite inhibitor of TC-PTP by contacting a test compound with TC-PTP having at least one amino acid as recited in claim 58, 62, 63, or 64. It should be noted that the recitation "an exosite inhibitor of TC-PTP" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a

process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

The reference of Asante-Appiah et al. teaches a method for assaying the inhibitory activity of compounds against recombinant human Asante-Appiah et al. by contacting the compounds with recombinant human TC-PTP in the presence of various substrates (p. 26037, right column, Figure 2, and Tables IV-VI). This anticipates claims 58 and 62-64 as written.

While it is acknowledged that Asante-Appiah et al. is silent as to the amino acid sequence of the recombinant human TC-PTP used in the inhibitory assays, the polypeptide used in the reference of Asante-Appiah et al. appears to be identical to the recombinant human TC-PTP disclosed in the specification. Thus, absent evidence to the contrary, the polypeptide of used in the reference of Asante-Appiah et al. comprises at least one amino acid as recited in claim 58, 62, 63, or 64. Since the Office does not have the facilities for examining and comparing applicant's TC-PTP protein with the TC-PTP protein of the prior art, the burden is on the applicant to show a novel or unobvious difference between the claimed product and the product of the prior art (i.e., that the TC-PTP protein of the prior art does not possess the same material structural and functional characteristics of the TC-PTP protein as recited in the claims). See *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977) and *In re Fitzgerald* et al., 205 USPQ 594.

Citation of Relevant Art

[15] The art made of record and not relied upon is considered pertinent to applicant's disclosure. Wiesmann et al. (*Nat Struc Mol Biol* 11:730-737) teaches inhibition of PTP-1B using various compounds that bind to an allosteric site of PTP-1B. In view of the publication date of Wiesmann et al., the reference is not available as prior art under 35 U.S.C. 102.

Conclusion

[16] Status of the claims:

Claims 47-64 are pending.

Claims 47-64 are rejected.

No claim is in condition for allowance.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David J. Steadman whose telephone number is 571-272-0942. The examiner can normally be reached on Mon to Fri, 7:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathleen Kerr can be reached on 571-272-0931. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David J. Steadman, Ph.D.
Primary Examiner
Art Unit 1656